ISO 7240-27:2018 (E)

Fire detection and alarm systems — Part 27: Point type fire detectors using a smoke sensor in combination with a carbon monoxide sensor and, optionally, one or more heat sensors

Contents

reword
roduction
рре
rmative references
and definitions and some la
ms, definitions and symbols
neral requirements
Compliance Response threshold value of detectors using scattered or transmitted light Individual alarm indication Connection of ancillary devices Monitoring of detachable detectors Manufacturer's adjustments On-site adjustment of response behaviour Protection against the ingress of foreign bodies Rate-sensitive CO response behaviour Smoke response to slowly developing fires Requirements for software controlled detectors General Software design Storage of programs and data
sts
General Atmospheric conditions for tests Operating conditions for tests Mounting arrangements Tolerances Measurement of smoke response threshold value Measurement of CO response threshold value Measurement of heat sensor response value Provision for tests Test schedule Test report Repeatability of smoke response Object of the test Test procedure Requirements Repeatability of CO response Object of the test Test procedure Requirements Directional dependence of smoke response Object of the test Test procedure Requirements Directional dependence of Smoke response Object of the test Test procedure Requirements Directional dependence of CO response Object of the test

5.5.2	Test procedure
5.5.3	Requirements
5.6	Directional dependence of heat response (optional function)
5.6.1	Object of the test
5.6.2 5.6.3	Test procedure
5.6.3 5.7	Requirements
5.7 5.7.1	Lower limit of heat response (optional function) Object of the test
5.7.1	Test procedure
5.7.3	Requirements
5.8	Reproducibility of smoke response
5.8.1	Object of the test
5.8.2	Test procedure
5.8.3	Requirements
5.9	Reproducibility of CO response
5.9.1	Object of the test
5.9.2	Test procedure
5.9.3	Requirements
5.10	Reproducibility of heat response (optional function)
5.10.1	Object of the test
5.10.2	Test procedure
5.10.3	Requirements
5.11	Exposure to chemical agents at environmental concentrations
5.11.1	Object of the test
5.11.2	Test procedure
5.11.3	Requirements
5.12 5.12.1	Long-term stability of CO response
5.12.1	Object of the test Test procedure
5.12.3	Requirements
5.13	Saturation
5.13.1	Object of the test
5.13.2	Test procedure
5.13.3	Requirements
5.14	Variation in supply parameters
5.14.1	Object of the test
5.14.2	Test procedure
5.14.3	Requirements
5.15	Air movement
5.15.1	Object of the test
5.15.2	Test procedure
5.15.3	Requirements
5.16	Dazzling
5.16.1	Object of the test
5.16.2 5.16.3	Test procedure Requirements
5.10.3	Dry heat (operational)
5.17.1	Object of the test
5.17.2	Test procedure
5.17.2.1	Measurements during conditioning
5.17.2.2	Final measurements
5.17.3	Requirements
5.18	Dry heat (endurance)
5.18.1	Object of the test
5.18.2	Test procedure
5.18.2.1	Final measurements
5.18.3	Requirements
5.19	Cold (operational), smoke
5.19.1	Object of the test
5.19.2	Test procedure
5.19.2.1	Measurements during conditioning
5.19.2.2	Final measurements
5.19.3	Requirements
5.20	Cold (operational), CO

5.20.1	Object of the test
5.20.2	Test procedure
5.20.2.1	Measurements during conditioning
5.20.2.2	Final measurements
5.20.3	Requirements
5.21	Damp heat, cyclic (operational)
5.21.1	Object of the test
5.21.2	Test procedure
5.21.2.1	Measurements during conditioning
5.21.2.2	Final measurements
5.21.2.3	Requirements
5.22	Damp heat, steady-state (operational)
5.22.1	Object of the test
5.22.2	Test procedure
5.22.2.1	Measurements during conditioning
5.22.2.2	Final measurements
5.22.3	Requirements
5.23	Damp heat, steady-state (endurance)
5.23.1	Object of the test
5.23.2	Test procedure
5.23.2.1	Final measurements
5.23.3	Requirements
5.24	Low humidity, steady-state (endurance)
5.24.1	Object of the test
5.24.2	Test procedure
5.24.2.1	Final measurements
5.24.3	Requirements
5.25	Sulfur dioxide SO2 corrosion (endurance)
5.25.1	Object of the test
5.25.2	Test procedure
5.25.2.1	Final measurements
5.25.3	Requirements
5.26	Shock (operational)
5.26.1	Object of the test
5.26.2	Test procedure
5.26.2.1	Measurements during conditioning
5.26.2.2	Final measurements
5.26.3	Requirements
5.27	Impact (operational)
5.27.1	Object of the test
5.27.1	Measurements during conditioning
5.27.1.2	Final measurements
5.27.1.2	Requirements
5.27.2	Vibration, sinusoidal (operational)
5.28.1	Object of the test
5.28.2	Test procedure
5.28.2.1	Measurements during conditioning
	Final measurements
5.28.2.2	
5.28.3	Requirements
5.29 5.20 1	Vibration, sinusoidal (endurance)
5.29.1 5.29.2	Object of the test Test procedure
	Final measurements
5.29.2.1	
5.29.3	Requirements
5.30	Electromagnetic compatibility (EMC) immunity tests (operational)
5.30.1	Object of the test
5.30.2	Requirements
5.31	Fire sensitivity
5.31.1	Object of the test
5.31.2	Test procedure
5.31.2.1	Initial conditions
5.31.2.2	Measurement during conditioning
5.31.3	Requirements

6	Test report		
7	Marking		
8	Data		
8.1 8.2	Hardware documentation Software documentation		
Annex A	(normative) Gas test chamber for CO response threshold value and cross sensitivity measurements		
Annex B	(normative) Construction of the heat tunnel		
Annex C	(normative) Apparatus for dazzling test		
Annex D	(normative) Apparatus for impact test		
Annex E	(normative) Fire test room		
Annex F	(normative) Smouldering (pyrolysis) wood fire (TF2)		
F.1 F.2 F.3 F.4 F.5 F.6	Fuel Hotplate Arrangement Heating rate End-of-test condition Test validity criteria		
Annex G	(normative) Glowing smouldering cotton fire (TF3)		
G.1 G.2 G.3 G.4 G.5	Fuel Arrangement Ignition End-of-test condition Test validity criteria		
Annex H	(normative) Flaming plastics (polyurethane) fire (TF4)		
H.1 H.2 H.3 H.4 H.5 H.6 H.7	Fuel Conditioning Arrangement Ignition Method of ignition End-of-test condition Test validity criteria		
Annex I	(normative) Liquid (heptane) fire (TF5)		
I.1 I.2 I.3 I.4 I.5	Fuel Arrangement Ignition End-of-test condition Test validity criteria		
Annex J	(normative) Low temperature black smoke (decalene) liquid fire (TF8)		
J.1 J.2 J.3 J.4 J.5 J.6	Fuel Arrangement Volume Ignition End-of-test condition Test validity criteria		

Annex K (informative) Information concerning the construction of the gas test chamber

Page count: 61